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CHANGES IN LIPOPROTEIN PARTICLE NUMBER WITH EZETIMIBE/SIMVASTATIN COADMINISTERED WITH EXTENDED-RELEASE NIACIN IN PATIENTS WITH TYPE II HYPERLIPIDEMIA

ACC Moderated Poster Contributions
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Authors: *Anh Le, Ran Jin, Andrew Tershakovec, David Neff, Joanne Tomassini, James Otvos, Peter Wilson, Atlanta VA Medical Center, Decatur, GA, USA, Emory University School of Medicine, Atlanta, GA, USA*

Background: HDL-C raising and LDL-C lowering are believed to reduce risk for vascular disease. The effects of these therapies on lipoprotein particle numbers have not been well studied in Type II hyperlipidemia (T2HLP).

Methods: This analysis of a 24-wk, multicenter, randomized, double-blind study included adults with T2HLP who received Ezetimibe/Simvastatin (E/S, 10/20 mg), Extended-Release Niacin (N) or the combination (E/S + N). N was titrated over 12 wks to 2 g/d. HDL and LDL particle number (HDLp, LDLp) were measured with NMR spectroscopy (LipoScience).

Results: Changes in lipid measures between baseline and 24 weeks were analyzed for 577 participants (n=124 N only, 160 E/S only, 293 E/S+N). HDLp increased the most and LDLp decreased to the greatest degree with E/S+N, which differed significantly from N or E/S (Table). In tertile (T1/T2/T3) analyses those with the lowest HDLp had the greatest percent increase in HDLp ([T1/T2/T3] N: [18.4/7.9/2.1], E/S: [19.3/12.2/5.3], and E/S+N: [26.9/13.8/6.9]. The highest tertile of LDLp had the greatest percent reduction in LDLp (N: [18.3/23.1/24.6], E/S: [29.7/38.3/41.8], and E/S+N: [44.3/ 49.0/ 50.5]). HDLp and LDLp tertile results were significant at p<0.001 for all treatment groups.

Treatment	HDL-C Baseline Mean (SD) (mg/dL)	HDLp Baseline Mean (SD) (umol/L)	HDLp Change (significance*)	LDL-C Baseline Mean (SD) (mg/dL)	LDLp Baseline Mean (SD) (nmol/L)	LDLp Change (significance*)
N	49.8 (13.7)	32.0 (6.0)	+9.8% (p<0.001)	158 (22.1)	1729 (335)	-21.5% (p<0.001)
E/S	48.4 (12.8)	32.0 (6.0)	+12.8% (p<0.03)	156 (21.3)	1758 (332)	-36.8% (p<0.03)
E/S+N	46.7 (12.1)	32.3 (6.1)	+16.2% referent	156 (22.9)	1722 (302)	-47.7% (referent)
*Statistical difference relative to E/S +N group.						

Conclusions: Combination therapy with E/S+N increased HDLp and reduced LDLp more than E/S or N alone in persons with T2HLP. The greatest changes in HDLp ad LDLp occurred in those subjects with the lowest HDLp and highest LDLp at baseline.